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The science program at Nova High School is structured to meet the needs of a scientific society. The junior high program emphasizes the accumulation, tabulation, and analysis of data. The senior high program makes use of these processes in the investigation of various subject areas. The units composing the high school curriculum are described. Unit 1 deals with such simple laboratory equipment as the ruler, balance, graduated cylinder, and bunsen burner. Unit 2 focuses on the simplification of material into basic parts and the concept of elements. Unit 3 deals with the similarities of the reactions of the halogens with the alkali metals of lithium, sodium, potassium, and hydrogen; the periodic table is presented. Units 4 and 5 deal with the organization of biology. Samples of plants and animal life are gathered and their differences and similarities are studied; these are the basis for a sorting process which leads to classification. Unit 4 deals with collecting and gross sorting; Unit 5 deals with structural differences. Units 6 and 7 are concerned with the organization of physics. A series of experiments on heat, electricity, magnetism, sound and light, and mechanics are given. Units 8-11 focus on the scientists' search for the beginnings of the universe. The theories of the formation of the earth, oceans, and the atmosphere are studied. Units 12 through 17 deal with the fundamental particles of science. Units 18 through 20 focus on the search for reason; models are used to make reason out of what seems to be chaos. Units 21 through 24 deal with explanations based on probability and statistics. Units 25 through 38 concentrate on the concepts of time, space, and matter.							
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Science at Nova is well structured to meet the needs of a scientific society. The Junior High School Program is heavily biased toward the accumulation, tabulation, and anyalyzation of data. The senior high curriculum makes use of these precesses in the investigation of various subject areas.

The student begins his science experiences with an introduction to the metric system and some of the tools of measurement. He begins with an "invented" system of measurement and proceeds to the metric system. He should see the need for standards. No attempt is made to have students convert from English to Metric system. All future work will be in the metric system.

Students are introduced to data sheets in Unit one and in later units then are expected to present their problem along with a data sheet of their own design before attempting an experiment. The faculty will use data sheets in their teaching to help familiarize the students with them.

In Unit One, the student learns to use some simple lab. equipment such as the ruler, balance, graduated cylinder, and bunsen burner.

Unit Two through Seven are part of a larger division, organization.

Unit Two involves the student in the simplification of material into basic parts and the idea of elements. Once he arrives at the idea that atoms are the smallest part of matter (that retains the identity of the matter) he proceeds to isolate and element from nature and study its properties under varying conditions. With this element, iodine, firmly in hand, he proceeds to use similar elements of Bromine and Chlorine.

Unit Three shows the similarities of the reactions of the halogens with the alkali metals, lithium, sodium, potassum, and their near relative, hydrogen. Students are led to these similarities and are introduced to the periodic table. Neither Unit 2 nor Unit 3 are concerned with atomic structure.

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Units 4 and 5 present the organization in Biology. Students gather samples of plants and animal life and look for differences and similarities. These are the basis for a sorting process that leads to classification. Unit 4 deals with collecting and gross sorting, unit 5 deals with structural differences and the construction of a "Key".

Unit 6 and 7 are concerned with the organization of Physics. Students will be reminded that organization is the theme and will be given a series of experiments, the student should be able to group these into main headings. Some of these divisions will be heat, electricity, and magnetism, sound and light, and mechanics. We are not treating these laboratory exercises too lightly, for if the student is to catalogue, he must have an understanding of the intent of the exercise.

Units 8 thru 11 deal with the scientists search for beginnings. The student will learn of the theories of the formation of the earth, oceans, and the atmosphere. He will learn of compositions and how they are determined. He will discover the different forms of rock and how to distinguish them. The first two units, eight and nine, will be interpretation of evidence to substantiate the theory of the beginning of the earth.

Units ten and eleven deal with evolution and the interpretation of the evidence of evolution. Students will study early forms of life, adaptability, effects of large environmental changes on an organism. The dangers of projection of ideas beyond evidence will enter into this unit. This is considered the last unit of a more typical 7th grade, but at Nova we continue with our next series of units.

Unit twelve thru seventeen deals with the fundamental particles of science.

Units twelve and thirteen are concerned with the cell as the fundamental bit of life. The student follows the development of the cell theory from its beginnings. He learns of the limitations imposed on observations by the degree of development of other areas of science. He learns of parts of the cell and their functions and studies types of cells and cell division.

Units fourteen and fifteen will deal with the electric charge and a fundamental particle in physics. Extension work will be done with the action of electrons and protons and their position in the atom. Other sub-atomic particles will be covered, as will radioactivity and its detection. Mention will be made of the idea of quanta and its application to the atom.

Units sixteen and seventeen deal with atoms and molecules - the fundamental particles of chemistry. The students are introduced to the evidence supporting the atomic molecular theory. He will investigate the nature of atoms and molecules, and learn some general ideas about how atoms combine to form molecules. He will be introduced to basic inorganic reactions, simple equations, and methods of detecting chemical changes.

The next major topic is the Search for Reason. It covers three units and is an explanation of the use of models to make reason out of what seems to be chaos. They will study crystal structure and organic chemistry from models that they will construct. Students will make predictions about behavior from the models that they construct. Models for enzymes will be included.

Units Twenty-one thru twenty-four deal with explanations through probability and statistics. Unit twenty-one concerns the gas laws, the kinetic molecular theory, and the derivation of absolute zero. From equipment supplied, the student derives data that enables him to "discover" the laws and extrapolate to absolute zero.

Unit twenty-one is concerned with concentration vs rate of reactions, temperature as a factor of reaction speed, and other statistical analysis of chemical systems.

Units twenty-three and twenty-four show probability in heredity and ecological populations, and the statistical relationship of cancer to smoking. Other cause - result relationships will appear.

The Units twenty-five - thirty-eight will be derived from the Time, Space, Matter project if they consent. Otherwise, Nova will begin the writing of the 9th grade sequence upon completion of the 24th Unit. Nova will use Yellow Version BSCS, CHEMS, and PSSC as the texts for these academic subjects. Other courses will be adopted or written as need arise. No description for the named courses will be written since these are available from other sources.